

R E M A R K S

This paper is being filed in response to the Office Action dated October 3, 2003 that was issued in connection with the above-identified patent application. Applicants enclose herewith a Petition for Extension of Time pursuant to 37 C.F.R. §1.136(a) and the fee required under 37 C.F.R. §1.17(a)(3). Applicants also enclose herewith a Request For Continued Examination under 35 U.S.C. § 132(a) and 37 C.F.R. §1.114(a)(2) and the fee required pursuant to 37 C.F.R. § 1.17(e). Applicants respectfully request reconsideration of the instant application in view of the amendments and remarks presented herein.

Claims 1-9 are pending in the instant application. Claims 3 and 7 have been cancelled herein. Claims 1, 4, 5, 8, and 9 have been amended herein. Support for these amendments may be found, for example, in the specification at page 9, lines 9-14 and original claims 1, 4, 5, 8, and 9. Accordingly, these amendments do not include new matter. Upon entry of the instant amendment, claims 1-2, 4-6, and 8-9 will be pending.

Claim 1 has been objected to because of an alleged punctuation error after "SnO" at the end of line 12 of the claim. Applicants have amended claim 1 at line 12 to replace a comma with a semicolon and assert that this amendment does not alter the scope of claim 1. In view of this amendment, Applicants respectfully request withdrawal of this objection.

A. Claims Are Fully Supported by the Original Specification

Claims 1, 4, 8, and 9 have been rejected under 35 U.S.C. § 112, first paragraph as allegedly containing new matter in the phrase "substantially free of surfactant." Applicants traverse this rejection and assert that claims 1, 4, 8, and 9, as amended herein, do not contain new matter. Applicants, therefore respectfully request withdrawal of this rejection.

Claims 4, 8, and 9 have also been rejected under 35 U.S.C. § 112, first paragraph as allegedly containing new matter in the phrase "metallic powder has length along its longest axis of 0.5-5 μm ." While the Examiner has acknowledged that the specification contains support for a flake type particulate having a particle size of 0.5 – 5 μm and thickness of 0.1 – 0.5 μm , the Examiner has alleged that the specification as originally filed does not provide support for a flake type filler particle that has a length along its longest axis of 0.5 – 5 μm .

Applicants traverse this rejection and assert that one of ordinary skill in the art would recognize that disclosure of a particulate having a particle size of 0.5 – 5 μm in this context implicitly means that the given dimension is that of the particle's longest axis. Therefore, this language is fully supported by the application as filed. Moreover, as amended herein, claims 4, 8, and 9 each recite "an average thickness of 0.1-0.5 μm ." Applicants, therefore, respectfully request withdrawal of this rejection.

B. Claims Are Patentable over Odawa in View of Ogata

Claim 1 has been rejected under 35 U.S.C. § 103(a) as allegedly obvious over U.S. Patent No. 5,753,740 issued to Odawa et al. (hereinafter "Odawa") in view of U.S. Patent No. 5,753,740 [*sic*, No. 6,235,407?] issued to Ogata et al. (hereinafter "Ogata").

Applicants traverse this rejection and assert that neither Odawa nor Ogata teach or suggest each and every element of the instantly claimed invention. Claim 1, as amended herein, recites "a first resin solution consisting of phenoxy resin" and "wherein said first resin solution comprises the largest portion by weight of all of the other components individually." Neither Ogata nor Odawa teach such compositions. On the contrary, Ogata teaches away from metal-powder-containing organic resin films having a phenoxy resin concentration of 40 to 90% of the

organic resin. *See e.g.* Ogata, col. 2, lines 31-41. Therefore, Applicants respectfully request withdrawal of this rejection.

C. Claims Are Patentable over Odawa in View of Ogata, Suzuki, and Pfeil

Claims 1-9 have been rejected under 35 U.S.C. § 103(a) as allegedly obvious over Ogata in view of Odawa, further in view of U.S. Patent No. 5,330,850 issued to Suzuki et al. (hereinafter “Suzuki”) and U.S. Patent No. 5,612,394 issued to Pfeil et al. (hereinafter “Pfeil”). The Examiner has alleged that Ogata teaches an organic resin film containing amine-modified epoxy resins (*e.g.* phenoxy resins) and a metal powder. While the Examiner has acknowledged that Ogata teaches addition of polytetrafluoroethylene wax to a layer other than the metal particulate-containing layer, the Examiner has alleged that Ogata teaches that the metal particulate-containing layer may contain a lubricant and lists polytetrafluoroethylene wax as a suitable lubricant for the same resins as are present in the metal particulate-containing layer. While the Examiner has acknowledged that Ogata fails to teach a (i) waterborne resin solution also containing (ii) colloidal silica and (iii) melamine resin, the Examiner has alleged that Odawa, Suzuki, and Pfeil respectively disclose these features.

Applicants traverse this rejection and assert that the Office Action and the cited documents fail to establish a *prima facie* case of obviousness. To make a *prima facie* case of obviousness, the Examiner must show (1) that there is a suggestion or motivation to modify or combine the teachings as asserted, (2) that one of ordinary skill in the art would have a reasonable expectation of success, and (3) that the combined references teach or suggest each and every element of the claimed invention. *See e.g.* MPEP § 2143. Applicants respectfully assert that the instant Office Action does not satisfy any of these requirements. Moreover, even

if a *prima facie* case exists, Applicants also traverse this rejection on the grounds that the instantly claimed invention clearly meets one of the indicia of nonobviousness in that it functions without the need for an element (*i.e.* an acid catalyst) that the cited documents teach is required.

1. No Suggestion to Combine Odawa, Ogata, Suzuki, and Pfeil

Where an obviousness determination relies on multiple documents, there must be some teaching or suggestion to combine the asserted documents to arrive at the claimed invention. *See e.g. Ecolochem, Inc. v. Southern California Edison Co.*, 227 F.3d 1361, 1372 (Fed. Cir. 2000). The combinability of prior art documents is undermined where (a) the art teaches away from the asserted combination, (b) the proposed modification renders the prior art composition unfit for its intended purpose, **or** (c) the proposed modification changes the principle of operation. *See e.g.* MPEP §§ 2141.02 (“prior art must be considered in its entirety, including disclosures that teach away from the claims”) and 2143.01 (“the proposed modification cannot render the prior art unsatisfactory for its intended purpose”) (“the proposed modification cannot change the principle of operation of a reference”). Applicants respectfully assert that the combination of Odawa, Ogata, Suzuki, and Pfeil run afoul of all three of these counterindications of obviousness.

(a) Federal Circuit Has Rejected a Trade-Off Argument

In the instant case, the Examiner has acknowledged that Ogata fails to teach a waterborne resin solution. The Examiner has alleged, however, that it would have been obvious to one of ordinary skill in the art to modify Ogata to be an aqueous solution in view of Odawa’s disclosure that the use of organic solvents create a hazardous working environment. Although the Examiner has also acknowledged that Odawa discloses that water-based solutions are less

corrosion resistant and less water resistant, the Examiner has alleged that one of ordinary skill in the art nonetheless would have viewed these losses as tradeoffs for increased safety. Applicants respectfully disagree and assert that the Federal Circuit has rejected obviousness challenges based on combinations of prior art references where the references teach away from the combination.

For example, in *Winner International Royalty Corp. v. Wang* the Court of Appeals for the Federal Circuit (CAFC) held that it would not have been obvious to one of ordinary skill in the automobile antitheft device art to combine two prior art documents where doing so would sacrifice security for the sake of convenience. *See Winner International Royalty Corp. v. Wang*, 202 F.3d 1340 (Fed Cir. 2000), *cert. denied* 530 U.S. 1238, 120 S.Ct. 2679 (“Trade-offs often concern what is **feasible**, not what is, on balance, **desirable**. Motivation to combine requires the latter.”)(emphasis added). Likewise, in *Gambro Lundia AB v. Baxter Healthcare Corporation*, the CAFC held that one of ordinary skill in the art would not consider it obvious to modify a dialysis machine to include a valve that interrupted fluid flow where the prior art taught that constant fluid flow was essential for the patient’s health. *See Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573 (Fed. Cir. 1997).

The outstanding Office Action has raised an allegation that one of ordinary skill in the art would have been motivated to combine Ogata and Odawa to alleviate concerns over using hazardous solvents. Applicants respectfully submit that this is like saying that one of ordinary skill in the art would have been willing to suffer the adverse health consequences taught by the prior art references in *Gambro Lundia* to obtain the improved accuracy in fluid flow measurement. This is manifestly unsound since the purpose of dialysis is to maintain or improve the patient’s health. Applicants further submit that this allegation is like saying that one of

ordinary skill in the lock design art would be willing to forego the security of a locking bolt in favor of the convenience of a ratcheting mechanism. This is equally untenable since the combination so clearly undermines the very purpose of the lock.

Likewise, in a field of art where safety precautions for hazardous solvents are well-established, it is scarcely conceivable that one of ordinary skill in the art would have surrendered corrosion resistance in a coating meant to confer corrosion resistance to gain an improvement in safety. Odawa acknowledges the infeasibility of water-based resins in stating “the technical means have been demanded for preventing water resistance and corrosion resistance from decreasing even when the compositions are made water-based.” *See Odawa*, col. 2, lines 14-17. In the Federal Circuit’s view, trade-offs are justified where they are feasible, not merely desirable. *See Winner*, 202 F.3d at 1349. It is only Applicants’ disclosure that teaches that this safety benefit may be attained without giving up corrosion resistance. Therefore, in view of Odawa’s clear disclosure that waterborne compositions are substantially less resistant to corrosion, Odawa is not combinable with Ogata under recent Federal Circuit precedent.

(b) Asserted Modification of Ogata Would Improperly Make It Unfit for Its Intended Purpose

The Examiner has alleged that one of ordinary skill in the art would be motivated to modify Ogata’s solvent based resin solutions by replacing the organic solvent(s) with aqueous solutions according to Odawa.

According to the MPEP, there is no suggestion or motivation to make a proposed modification, where the modification renders the prior art invention unsatisfactory for its intended purpose. *See MPEP* § 2143.01, left column of page 2100-127, Rev. 1, Feb. 2003, *citing In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984)(no suggestion or motivation to modify gravity-assisted gasoline strainer with inlet and outlet on top and impurity drain on bottom by flipping

upside down to arrive at the claimed blood filter because doing so would render strainer incapable of draining aqueous layer of impurities from the bottom).

Ogata is clearly directed to highly corrosion resistant resins. *See e.g.* Ogata, Title (“Steel Plate for **Highly** Corrosion-Resistant Fuel Tank”)(emphasis added); *see also Id.*, Abstract (A **highly** corrosion resistant steel sheet for fuel tank comprising....)(emphasis added). Ogata discloses that the urgent need for corrosion resistance is driven by safety requirements that do not allow fuel tanks to have seam welding defects or to produce corrosion products that may clog the fuel filter compounded by environmental regulations that require the use of highly corrosive gasoline formulations (*e.g.* with ethanol). *See Id.*, col. 1, lines 26-43. Responding to this need, Ogata claims states “an object of the ... invention is to obviate the drawbacks of the currently available tank materials and provide a **highly** corrosion resistant steel sheets [*sic*] adapted for use in a fuel tank which has **excellent** inner surface corrosion resistance to the alcohol-blended gasoline, and in particular, to a gasoline containing methanol or formic acid formed by oxidation of the methanol.” *See Id.* at col. 3, lines 30-36 (emphasis added).

Therefore, in view of Odawa’s clear disclosure that water-based resins suffer from reduced water resistance and corrosion resistance, Odawa teaches that switching the solvent system of the resin of Ogata to be water-based would render Ogata unfit for its intended purpose, *e.g.* Ogata’s resin would no longer be suitable for use with gasoline containing methanol. The instant Office Action, in failing to provide any evidence demonstrating that such modified resins would be resistant to corrosion in the presence of alcohol-containing gasoline, has failed to satisfy his burden of providing “clear and particular” support for the combinability of these documents. *See Winner*, 202 F.3d at 1348-1349 (“the showing of combinability, in

whatever form, must nevertheless be ‘clear and particular’”), *citing In re Dembiczak*, 175 F.3d 994, 999 (Fed.Cir.1999).

(c) Asserted Modification of Ogata Would Improperly Alter Its Principle of Operation

Prior art references fail to render claims *prima facie* obvious where the proposed modification or combination of prior art references changes the principle of operation of the prior art invention. *See* MPEP § 2143.01, right column of page 2100-127, Rev. 1, Feb. 2003, *citing In re Ratti*, 270 F.2d 810 (C.C.P.A. 1959) (“suggested combination of references would require a substantial reconstruction and redesign of the elements shown in the [primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate”).

In the instant case, the Examiner has alleged that one of ordinary skill in the art would be motivated to modify Ogata’s solvent based resin solutions by replacing the organic solvent(s) with aqueous solutions according to Odawa. Applicants respectfully disagree and assert that this impermissibly requires modification of the principle of operation of Ogata’s resins.

2. Odawa, Ogata, Suzuki, and Pfeil Fail to Suggest Every Element

Claim 1 recites “PTFE-based wax having a particle size of 0.1-0.3 μm .” As shown in Table 1 of the instant application, the content and particle size of PFTE is important to make a stable water-borne phenoxy resin solution. Odawa, Ogata, Suzuki, and Pfeil, however, fail to disclose this PFTE particle size.

Moreover, claim 1 recites “wherein said [phenoxy resin] solution comprises the largest portion by weight of all of the other components individually.” However, Odawa, Ogata,

Suzuki, and Pfeil do not teach or suggest such waterborne phenoxy resin solutions. Applicants assert that one of ordinary skill in the art would recognize that a phenoxy resin is not the same as polyurethane resin in solution stability and in the resin coated layer. Thus, the present invention differs from Odawa both in the PTFE particle size and the type of resin used.

3. Instant Invention Functions without an Acid Catalyst

The omission of an element of the prior art disclosure while retaining the element's function has been held to be an indicia of nonobviousness. *See* MPEP § 2144.04(II)(B), *citing In re Edge*, 359 F.2d 896 (C.C.P.A. 1966). In *Edge*, the court held that claims to a removable (e.g. by scratching) thin metal coating that obscured underlying print were nonobvious over prior art that also disclosed a removable thin metal coating, but required an intermediate transparent layer. *See Edge*, 359 F.2d at 899.

In the present case, Odawa discloses a water-based rust inhibiting coating composition in what it identifies as the “third aspect” of its disclosure at col. 28, lines 40-64. However, Odawa appears to teach that its self-emulsifying polyurethane resin emulsion must include an aqueous phenol resin and an acidic catalyst. *See* Col. 31, lines 1-5. Applicants assert that the instant invention, by contrast, does not require an acid catalyst and is, nevertheless, highly corrosion resistant. Therefore, this omission, according to Edge, is further evidence that the instantly claimed invention is not obvious over Ogata and Odawa.

4. Summary

In view of the foregoing, the cited prior art fails to render the instant claims obvious since (i) the Office Action does not meet its burden to show that the cited documents may be combined as asserted, (ii) the documents themselves teach away from the combination,

and (iii) the combination impermissibly renders Ogata unsuited for its intended purpose and improperly requires modification of principle of operation. In addition, the asserted documents fail to teach or suggest each and every element of the claimed invention. A further indication that the instant claims are non-obvious is indicated by the fact that the instant invention functions without an acid catalyst, a material that the prior art deems essential. Therefore, Applicants respectfully request withdrawal of this obviousness rejection.

D. Claims Are Patentable over Lee in View of Ogata

Finally, claims 1-9 have been rejected under the judicially-created doctrine of obviousness-type double patenting as unpatentable over U.S. Patent No. 6,387,538 issued to Lee et al. (hereinafter “Lee”) in view of Ogata. Applicants enclose herewith a Terminal Disclaimer as to Lee. Consequently, since Lee is not available as prior art against the instant claims and Ogata alone fails to teach or suggest each and every limitation of the claims, Applicants respectfully request withdrawal of this rejection.

Therefore, Applicants believe that the instant application is in condition for allowance and respectfully request prompt, favorable action.

Applicants enclose herewith the fees required pursuant to 37 C.F.R. §§ 1.17(a)(3) and 1.17(e). While Applicants do not believe any additional fee is due with this submission, the Commissioner is hereby authorized to deduct any fees required with this submission not otherwise enclosed herewith from Deposit Account No. 02-4377. Two copies of this paper are enclosed.

Respectfully submitted,

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Enclosure